Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) A method for provisioning multiple digital receivers, comprising:

providing an analog to digital converter having an analog input and a digital output;

providing a plurality of digital receivers, each receiver having a programmable center frequency,

where the plurality of digital receivers are ~~configured~~ to receive digitized samples from the analog to digital converter and where each of the plurality of digital receivers includes a low-pass digital filter;

maintaining pre-computed sets of filter coefficients in non-volatile storage, each set corresponding to one of the plurality of low-pass digital filters, each filter having one of a predetermined set of bandwidths;

receiving a request to provision a selected one of the plurality of digital receivers;

selecting a first center frequency and a first bandpass bandwidth for provisioning the selected one of the plurality of digital receivers;

retrieving the filter coefficients associated with the first bandpass bandwidth;

subjecting the retrieved filter coefficients to a bandpass transformation corresponding to the first center frequency; and

loading the transformed filter coefficients into coefficient latches in the selected one of the plurality of digital receivers.

2. (canceled)

3. (previously presented) The method of claim 1, further including:

operating the selected one of the plurality of digital receivers at the first center frequency;

subsequent to said operating, loading the coefficient latches in the selected one of the plurality of digital receivers with transformed coefficients corresponding to a second center frequency; and

operating the selected one of the plurality of digital receivers at the second center frequency.

4. (currently amended) The method of claim 3, further including:

selecting a third ~~second~~ center frequency and a second bandpass bandwidth for provisioning a second one of the plurality of digital receivers, where said first and second bandpass bandwidths are unequal;

retrieving the filter coefficients associated with the third ~~second~~ bandwidth;

subjecting the retrieved filter coefficients to a bandpass transformation corresponding to the third ~~second~~ center frequency; and

loading the transformed coefficients into coefficient latches in the second one of the plurality of digital receivers.

5. (previously presented) The method of claim 1, where the analog to digital converter and the plurality of digital receivers are located within the upstream section of a cable modem termination system (CMTS) channel bank organized into upstream and downstream channels.

6. (previously presented) The method of claim 5, where the ratio of the number of upstream channels demodulated by the CMTS channel bank to a number of upstream input connectors of the CMTS channel bank is M.

7. (previously presented) The method of claim 6, where M is 16.

8. (previously presented) The method of claim 1, where the analog to digital converter, the plurality of digital receivers, and the non-volatile storage are implemented on a single integrated circuit.

9. (previously presented) The method of claim 5, where the CMTS channel bank is organized using a plurality of modules, each module having a plurality of downstream channels and a plurality of upstream channels.

10. (previously presented) The method of claim 9, where a number of the upstream channels is 4 times a number of the downstream channels.

11. (canceled)

12. (previously presented) The method of claim 5, where the CMTS channel bank has 4 times as many upstream channels as downstream channels.

13. (previously presented) The method of claim 5, where the CMTS is DOCSIS compatible.

14. (previously presented) The method of claim 5, where the upstream channels are in the 750-1000 MHz portion of the spectrum.

15. (previously presented) The method of claim 14, where at least one frequency stacker is used to densely pack each sub-band of the 750-1000 MHz spectrum portion.

16. (previously presented) The method of claim 1, where each of the plurality of digital receivers includes a finite impulse response (FIR) digital filter.

17. (currently amended) The method of claim 16, where one or more of said ~~each~~ FIR digital filters ~~filter~~ is an Optimum Equiripple Linear-Phase filter.

18-21. (canceled)

22. (previously presented) The method of claim 1, where a number of the filter coefficients for each of the low-pass digital filters is at least 16.

23. (previously presented) The method of claim 1, where a number of the filter coefficients for each of the low-pass digital filters is at most 24.

24. (currently amended) A system for provisioning multiple digital receivers, comprising:

an analog to digital converter having an analog input and a digital output;

a plurality of digital receivers, each of the plurality of digital receivers having a programmable center frequency, and each of the plurality of digital receivers including a low-pass digital filter;

means for coupling digitized samples to the plurality of digital receivers;

means for maintaining pre-computed sets of filter coefficients in non-volatile storage, each set corresponding to one of plurality of low-pass digital filters, each filter having one of a predetermined set of bandwidths;

means for receiving a request to provision a selected one of the plurality of digital receivers;

means for selecting a first center frequency and a first bandpass bandwidth for provisioning the selected one of the plurality of digital receivers;

means for retrieving the filter coefficients associated with the first bandpass bandwidth;

means for subjecting the retrieved filter coefficients to a bandpass transformation corresponding to the first center frequency; and

means for loading the transformed filter coefficients into coefficient latches in the selected one of the plurality of digital receivers.

25. (previously presented) The system of claim 24, further including:

means for operating the selected one of the plurality of digital receivers at the first center frequency;

means for loading, subsequent to said operating, the coefficient latches in the selected one of the plurality of digital receivers with transformed coefficients corresponding to a second center frequency; and

means for operating the selected one of the plurality of digital receivers at the second center frequency.

26. (currently amended) The system of claim 25, further including:

means for selecting a third ~~second~~ center frequency and a second bandpass bandwidth for provisioning a second one of the plurality of digital receivers, where said first and second bandpass bandwidths are unequal;

means for retrieving the filter coefficients associated with the third ~~second~~ bandwidth;

means for subjecting the retrieved filter coefficients to a bandpass transformation corresponding to the third ~~second~~ center frequency; and

means for loading the transformed coefficients into coefficient latches in the second one of the plurality of digital receivers.

27. (previously presented) The system of claim 24, where the analog to digital converter and the plurality of digital receivers are located within the upstream section of a CMTS channel bank organized into upstream and downstream channels.

28. (previously presented) The system of claim 27, where the ratio of the number of upstream channels demodulated by the CMTS channel bank to a number of upstream input connectors of the CMTS channel bank is M.

29. (previously presented) The system of claim 28, where M is 16.

30. (previously presented) The system of claim 27, where the CMTS channel bank is organized using a plurality of modules, each module having a plurality of downstream channels and a plurality of upstream channels.

31. (previously presented) The system of claim 30, where a number of the upstream channels is 4 times a number of the downstream channels.

32. (previously presented) The system of claim 27, where the CMTS channel bank has 4 times as many upstream channels as downstream channels.

33. (previously presented) The system of claim 27, where the CMTS is DOCSIS compatible.

34. (previously presented) The system of claim 27, where the upstream channels are in the 750-1000 MHz portion of the spectrum.

35. (previously presented) The system of claim 34, where at least one frequency stacker is used to densely pack each sub-band of the 750-1000 MHz spectrum portion.

36. (previously presented) The system of claim 24, where the analog to digital converter, the plurality of digital receivers, and the non-volatile storage are implemented on a single integrated circuit.

37. (previously presented) The system of claim 24, where each of the plurality of digital receivers includes a FIR digital filter.

38. (currently amended) The system of claim 37, where one or more of said ~~each~~ FIR digital filters ~~filter~~ is an Optimum Equiripple Linear-Phase filter.

39. (previously presented) The system of claim 24, where a number of the filter coefficients for each filter is at least 16.

40. (previously presented) The system of claim 24, where a number of the filter coefficients for each filter is less than or equal to 24.